

Kentucky Water Well Driller's Certification Board

Meeting Minutes
July 13, 2012

Opening Remarks:

Danny Kelly called to order the regular meeting of the Water Well Drillers Certification Board ("the Board") at 09:23 AM, on July 13, 2012. Greenbo Lake State Park near Ashland, Kentucky was the location of the meeting.

Roll Call:

Danny Kelly made roll call and all board members were present, with the exception of Todd Mills. Mark Sweet attended the board meeting as a guest.

Present:

Danny Kelly Chairman, Regional Water Well Driller Representative
Orris Hayes, Regional Water Well Driller Representative
Bart Davidson, KGS Representative
David Jackson, Cabinet Representative
Jim Bates II, Regional Water Well Driller Representative
Roy Toney, Public at Large Representative
Scotty Robertson, Water Well Driller Certification Program Coordinator

Guests:

Mark Sweet.

Absent:

Todd Mills, Regional Monitoring Well Driller Representative

Announcements:

Danny Kelly had no announcements but David Jackson announced the upcoming South Atlantic Jubilee to be held July 21, 2012 and that Scotty Robertson would be attending. Danny Kelly stated that he was also attending the Jubilee. Orris stated he might attend the Jubilee. Roy Toney asked what states are included in Jubilee. Danny stated Florida, Georgia, North Carolina, South Carolina, Delaware, Kentucky, Tennessee, and Virginia. Pennsylvania may soon join .

David stated that the paperwork for Bart Davidson's appointment to the board had been submitted to Governor Beshear for approval as a permanent member of board to fulfill Jim Dinger's term that expires August 5, 2012. Danny asked if anyone else had any announcements. No one had any so Danny moved on to the reading of "Scotty's lengthy minutes" of the May 4, 2012 board meeting.

Reading of Minutes:

Scotty handed out the meeting agenda and the minutes of the May 4, 2012 board meeting prior to the start of this board meeting. The members silently read the minutes of the meeting. Danny asked if everyone had read and was satisfied with the minutes, or had comments. Everyone affirmed that they had read them. Danny asked for a motion to approve the minutes.

Roy Toney made a motion to approve the minutes of the May 4, 2012 Kentucky Water Well Drillers Board meeting and David seconded the motion. Danny asked for a vote to approve the minutes. The motion to approve the minutes was approved unanimously by the board.

Old Business:

Danny started the discussion of old business with the progress being made on resubmitting of closed loop geothermal driller certification regulation otherwise known as House Bill 561. Orris Hayes mentioned that the legislature meets in January 2013. David said you can pre-file bills from November of 2012 until session starts on February 1, 2013. Danny said we need it done in October or November of 2012. He stated that he is going to bring it up at the Jubilee meeting later this month. They have a lawyer that can help with the bills wording. They also have a \$5000.00 matching fund to help promote the legislation. Danny also, announced that Jane Kane is retiring from South Atlantic Jubilee Board. So things will be changing at the Jubilee. He would let board know progress at next meeting.

Roy asked if we had the bill prepared. David said the bill may need better supporting documentation and a little tweaking. However, the bill is basically ready. Orris explained why the bill had trouble in last session of the legislature. David said gathering information for and against bill, financial impacts, support documentation from other states, and get attorney's comments and tweak bill accordingly. Danny said if it had got in sooner it would have past last time. Orris agreed.

A revenue question was brought up from Mark Sweet. Why cabinet is or was opposed to the bill. David explained cabinet position and that these issues need to be addressed and explained in support information why and how the new cost would be offset by approving changes to statutes. Scotty presented a table documenting number of drillers certified in Kentucky and the general decline in numbers over the last ten years. David reiterated that by adding geothermal drillers it would increase lost revenue from loss in water well drillers. Scotty said at end of last year we had 160 drillers obtain certification. This year so far we have had 106 pay their renewal fees.

Danny stated that a lot of holes are drilled that are not covered by regulations. Do we keep track of what types are drilled and how many are drilled? Scotty presented the board with tables with the number of each type of well drilled and plugged over the last ten years. Geothermal closed loop are currently not documented, but would be if statute passes legislature. Danny estimated

that one school he knew of was drilling 580 geothermal closed loop wells that will not be documented due to the lack of regulations requiring it.

Mark commented on the temporary wells that are put in and plugged each year that have to be documented and asked if they still need to be. Scotty responded that these temporary wells still have to be documented. David said regulations do not cover boreholes if no water is taken from them. Removing water from a borehole for whatever reason makes it a well. Danny said that's what he does not understand because any borehole drilled has the potential to allow contamination of the groundwater. Scotty said that this is covered by statute but not in water well regulations. It is covered in regulations as it is against the law to contaminate the waters of the commonwealth. That is why we have groundwater protection regulations and require drillers to have a groundwater protection plan. You have to seal the borehole if no water is taken but a well log is not required to be completed and submitted to state. David said as a driller, you should have a groundwater protection plan and best management plans that describe the methods of plugging the borehole. A discussion followed about definition of a well and piezometers. David said piezometers used strictly for water level measurements do not have to be tagged.

The next thing on the agenda was a discussion of sonic and dual rotary rigs and changing technologies. Danny began by asking question about number of geothermal wells installed per year in Kentucky. A short discussion of the data tables and number of wells drilled as compared to geothermal insured. Scotty said the Division of Water does not keep records on closed loop geothermal wells. Scotty further stated that his predecessor Joe Moffitt estimate that about 20,000 geothermal wells a year were being installed in Kentucky.

Danny said he has been very busy this year due to drought installing irrigation wells. He said that those that irrigated will make a fortune and those that did not are going to lose greatly. This followed with a short discussion of nitrogen getting in groundwater due to loss of crops.

Bart said we need to get information about tagging or not tagging piezometers out to drillers. David said we could put something in newsletter. Danny followed by starting a discussion of piezometers on levees and dams along Mississippi River, Mark commented on drilling on landslide to install piezometers. Scotty described a piezometer. Jim Bates asked how to plug such a well. Scotty said by over drilling. This was followed by discussion of artesian piezometers and then wells by Orris and Danny and their experiences.

Danny asked are we finished with house bill for now. Orris stated he was going to visit his senators and representatives and suggested the other board members do the same before the legislature meets again. He thinks it will be first subject on docket when they convene in 2013 and he handed out phone lists of senators and representatives.

Danny said after the Jubilee the board will be able to put it together. Danny will present draft bill to Jubilee lawyers for review. Jim asked for review of what happened last time. David reiterated the past events related to the bill and cabinets position and what needs to happen this time when it is filed.

Danny move the discussion back to Dual Rotary and Sonic Drilling discussion, he then requested David to inform the board on this issue. The cabinet sent out a memo requesting a list of potential topics addressing future regulatory issues, and we had placed geothermal drilling on this list. David stated that one of our colleagues suggested we open the regulations for drilling fees. In light of that, if we open regulations we may address this issue, but currently we are snowed under and we will likely look at it in future. Kentucky is one of few states that still utilize certification fees rather than permit fees to fund drillers program. Mark mentioned working in Tennessee and their permitting rules. Scotty mentioned that Joe Moffitt suggested that a water well variance be submitted for new drilling methods as a solution to it not being in regulations. Annular space is required in regulations but not needed by dual rotary. Orris suggested over drilling casing. Danny indicated that it was not practical to over drill. Danny explained drilling methods again. David said we may put a notice in newsletter informing drillers that if you are drilling by these methods then you need to submit a variance request for no annular space around casing. Orris asked how the well would then be sealed. Again, Danny explained the casing installation method that no annular space is created, and answered the board's additional questions.

Danny asked if anyone had seen a sonic rig operate. Scotty explained its operation. Danny discussed a job that he looked at, that was using sonic rig. Our regulations do not cover the new technology. David said that it might be time to open the regulations to include them.

David asked Danny to call for a short break at this time and he did so.

Before the meeting resumed a short discussion followed about uncertified drillers operating in Kentucky. David stated we do not get many calls about it but we know there are uncertified drillers drilling geothermal wells within the state.

Danny official called the meeting back to order. Scotty said that specialty drilling is to be noted on the certificate for licensed drillers. The regulations state that drilling methods in which the driller is qualified to operate should be on certificate. They currently are not put on the drilling card or certificate. Scotty asked the board what they want on the certificate and card. The Kentucky Division of Water (KDOW) has a problem in addressing this issue, in that, KDOW files do not include application records on many of the drillers that grandfathered in, or that have been in the program for a long time. KDOW records were purged and they do not have this information for all certified drillers. Orris responded, "why should it matter." Scotty said technically, if you have not tested for specific drilling methods, then the driller would have to go back and test for that specialty if he is using a new method. Jim said you could send out a questionnaire about it.

Scotty, said it is something the KDOW is currently not doing but it is in regulations. A lot of drillers applying for certification have trouble passing National Ground Water Association (NGWA) tests. David said we have to enforce the regulation or change the regulation. Orris said he tested for air rotary and cable tool. Scotty told them that other states call him wanting proof of test scores that are not available. All he can tell them is that at the time of his certification the driller met Kentucky's requirements. The NGWA is also purging records so they do not have test

scores on early drillers either. Danny asked, “what are Kentucky’s requirements for drillers to become certified?” Scotty quoted the regulations.

Kentucky’s exam only covers the water well construction for the type of drilling being certified. Orris asked, “what would KDOW recommend the board do to remedy the situation?” Scotty suggested adding a questionnaire to next years (2013-14) certification application. David said KDOW will look into the issue further.

Danny moved on to discuss tables that had been supplied to board. Scotty had prepared them at board’s request. Mark asked about number of geothermal wells installed in Kentucky for comparison. Scotty said we do not have any records to keep on them. He guessed the number that is going to be drilled per each new school being built as 300. Taking this and assuming one school per county, times the number of counties, that at a minimum some 36000 geothermal wells could be slated for Kentucky over the next few years. Due to government mandate on energy savings even more are anticipated. The total number would depend on the number of structures and size at each location. The federal mandate covers public schools, hospitals, universities, etc. The tables presented are for support of geothermal bill and the board discussed this earlier so no further discussion was needed.

Danny moved the discussion to Division of Plumbing letter from David Moore. David informed the board of previous history of a Memorandum of Understanding (MOU). Then he discussed Alan Burgess violation of plumbing regulations. David asked board if wording in letter was agreeable to board. Danny read the agreement to board. Board asked for definition of “Post Hydrant” whether it meant waterline after a hydrant or a hydrant that that is a post type. Frost-free hydrant cannot be sampled for coliform sampling without a double backflow preventer. Roy asked if this a common practice or just a one time event. David explained this is a common practice and a Memorandum of Understanding had been in place in past. This was brought to DOW’s attention when the Division of Plumbing fined Alan Burgess for violating the regulations and he requested DOW to intervene on his behalf. DOW’s investigation of the incident indicated that Alan did not follow installation per the MOU and was likely in violation of plumbing regulations. A discussion followed about who has the right to do what with electric and plumbing. It was agreed upon that the driller was responsible to the pressure tank and no further.

Jim Bates was only board member that was not in favor of MOU as written with clarification that it is a “frost free hydrant”. Scotty stated that the pressure tank is the end of the well components and from there on its plumbers association. Jim called for a motion for approval of MOU. Board is of opinion that well driller should work with the plumber. David will speak to Division of Plumbing to get a clarification on “Post Hydrant”. Bart suggested adding to first sentence “up to and including the pressure tank and if necessary a frost free hydrant for testing”. A short debate followed this. The board felt it meant stop at pressure tank with the exception of a frost free hydrant. The board, settled on David communicating this to the Division of Plumbing. DOW would issue a statement to drillers to install a sample port prior to pressure tank and include a diagram.

Roy made a motion to approve the go ahead with MOU with clarification on post hydrant and it is preferable to install a sample port before the pressure tank. Bart Davidson seconded the motion. Six board members voted to approve motion and Jim Bates was opposed. The motion carried.

Orris had additional question on the geothermal bill. How do we reduce financial impact on geothermal certification program. David said yes there is going to be an additional expense. However, the benefits outweigh the costs, by helping the profession, bringing Kentucky in line with surrounding states, protecting the public, the groundwater and environment. It will increase number of licensed drillers that are being lost, because of lack of need for private water wells due to public water supplies, and it will add accountability to drilling profession. Toney said make a list of benefits to submit with bill. David said eight to ten line items that promote the benefits of bill. Mark suggested one item as being a consideration of a fee structure. Jim is in disagreement of saying this at this time.

Orris said very little additional expense to driller and program, but additional expense to geothermal well owner. Permitting and filing fees may be added regulations to cover additional cost. David suggested that the board take this to Kentucky Groundwater Association they should start considering fees to cover costs and to get the cabinet on board with the statute. Danny mentioned as things to think about, for instance Tennessee requirements and fees to drill a well, like pump installer, well abandonment licenses.

Danny asked if there was any other old business. No one mentioned any so Danny proceeded to new business.

New Business:

Danny asked if there was any New Business. Mark Sweet passed out an email that he sent to Scotty, the issue is the UST branch passed a new set of regulations in October. They allow three levels of contamination to remain in groundwater. Groundwater is defined as any water below the "B" horizon. All water not created equal, to allow more or less contamination based on source. Benzene is the parameter chosen for this determination using risk factors.

A domestic use well is considered a receptor for a UST release. Currently surveys are being done at all unclosed USTs. The survey encompasses an area 300 meters around each site and locates springs and water wells within this area. If domestic use well or spring is found inside the 300-meter limit, there are more stringent standards, for clean up than if it is outside this limit. UST is directing that the domestic use wells within this 300 meter limit to be removed as to lower the clean closure levels required to be met so these sites can be closed with no further action. Mark stated he is not for, or behind this method of closure.

Mark has asked DOW and KGS for protocols for sampling springs and wells for VOCs and sent them to the UST Branch. Because he is concerned that the UST branch is going to start ordering domestic well sampling to be done to determine closures. Mark wants a standard method for sampling domestic use wells for cost reasons, but his concerns go further than this. He does not agree with abandoning water wells in order to expedite the closure of a UST site. Scotty asked

what gives UST the authority to order a domestic well on private property to be abandoned, without owner consent or compensation. Mark indicated the cost that state pays to abandon a well is insufficient to actually do the work.

David and Scotty were not aware of clean up standards based on current groundwater use. Mark said the UST branch is allowing 300 parts per billion as a clean up standard for UST release in soil, if no domestic use well or spring is inside this area. Scotty said Benzene is a known carcinogenic and currently, 5 ppb is MCL for Benzene drinking water. Mark said the UST is using 7 ppb for Benzene risk assessment water quality concentration. David said he was under the impression that cleanup levels had to be below the MCL or meet background. Mark would like DOW to talk with UST Branch. The UST branch is currently closing a lot of sites using these limits as action levels according to Mark.

Mark says UST has divided state up in three regions, eastern and western Kentucky and Karst. He thinks it is important to keep domestic use wells. Mark's people are having problems getting well samples. Mark wants to go through proper channels to get a proper protocol for sampling groundwater from domestic use wells. Orris said that pressure tank and water lines would have to be purged to get a good sample and volume would vary. Mark said water he is talking about is perch water in soil and weathered zone above water table that eventually gets into fractures and into groundwater. Mark said drillers would get more work if, at a minimum, one bedrock well was required to be installed and tested.

According to Mark, domestic wells are difficult to sample by a single method due to varying construction and pump installations. Mark had requested Division of Water Standard Operating Procedures. Scotty sent Mark a copy of them and EPA guidance documents. Mark sent that material as part of his email to UST branch.

Danny then called for a break for lunch. After lunch the board took up a Layne Corp. proposal to abandon a Raney Well near Brandenburg, Ky. Scotty described the well type and a proposed well abandonment. Layne wrote a letter describing abandonment, the regulation does not specifically cover these type wells. Scotty asked the board members for their opinion on the proposed procedures. Danny said his opinion of the proposal was as good as it could possibly get. A discussion followed about the proposed abandonment procedures and suggested changes the board would make to them. The wells are sixty years old in unconsolidated materials with about fifty foot of standing water with multiple eight-inch later screens extending into the aquifer at its base. The wells are one hundred feet deep and the inside diameter is thirteen feet.

This is the first company to propose abandoning these type wells in Kentucky. The board commended Layne and their clients for bringing this to board members attention. Orris gave his suggestions to accomplish this task, as did other members of the board. Layne suggested flowable fill to ensue the laterals do not collapse. Scotty had a question as to what flowable fill consists. Orris said it was sand and cement slurry on a low slump. David said that he thought cement was a better fill above the water table than bentonite. He also suggested a concrete slab on top. Danny disagreed concrete slab would cause problems later. Based on his experience he

thought Layne's description was a better method. Jim recommended a bentonite seal over gravel. Orris suggested adding fly-ash to flowable fill.

Jim said migration is the concern. So all agreed on a bentonite seal above pea gravel. David asked final cap is needed. Danny disagreed but Jim thought it was good idea. All agreed that top five foot of concrete casing should be removed. Bart suggested using downhole camera to verify fill placement. Orris suggested collecting samples for verification. Orris described grout testing for verification. Layne will submit a water well variance and this method for approval to abandon these wells.

A short discussion followed about the water wells in city of Louisville that has several of these type wells. David said told board about our conversation with Layne. Scotty had talked to them earlier about using divers and camera down the well during abandonment. Scotty had offer use of DOW camera if needed. However, he felt divers to inspect the well would not be required. Bart described the KGS new camera. David said we would respond to plan and let the board know what will happen.

Danny asked if there was any further new business. No further new business was brought up.

Next Meeting:

Danny asked for suggestions for the date, time, and location for the next meeting. A suggestion was made by Roy suggested Western Kentucky. Danny said he liked Cumberland Falls and asked if there were any others around London. Jim said Levi Jackson state park is not good condition now because of drought, but the board settled for James Audubon State Park in Henderson, KY. The next meeting date was proposed for September 14, 2012 after David mentioned he was going to Africa on vacation. Jim made a motion to meet in Audubon Park at 9:00 a.m. CST and David seconded the motion. Danny then called for a vote on the motion. The motion passed unanimously by the board.

Adjournment:

Danny asked for a motion to adjourn the meeting. A motion to adjourn was made by Jim and seconded by David and was passed unanimously. Danny Kelly adjourned the meeting at 15:30 p.m.

NOTE

It was determined after the meeting that Audubon Park could not accommodate a party of this size. The meeting location was moved and will be held at Kentucky Dam Village State Resort Park at 9:00 a.m. EST on September 14, 2012.